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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,775	02/21/2006	Takumi Hijii	127091	6362
25944 7590 07/28/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
IP, SIKYIN				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/568,775

Applicant(s)

HIJII ET AL.

Examiner

Sikyin Ip

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/26/07; 4/17/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 5 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 3, 5, 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, claims 1, 3, 5, and 9, in the reply filed on April 17, 2008 is acknowledged. The traversal is on the ground(s) as set forth in said reply. This is not found persuasive because the compositions in Group I and Group II are different. In applicants' argument that there is no statement that Group I composition can contain rare earth metal. Since both Group I and Group II inventions are directed to alloy compositions that are intentionally made distinct from each other, they do not correspond to the same special technical feature.

Applicants' argument in page 2, second paragraph is noted. As are evinced by the lack of unity and arguments, serious burden has been shown to exam both Groups.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 5, and 9 are rejected under 35 U.S.C. § 103 as being unpatentable over EP 0799901 (PTO-1449).

EP 0799901 discloses the features including the claimed Mg based alloy compositions and Ca/Al ratio (page 2, line 51 – page 3, line 9 and lines 40-43). Therefore, when prior art compounds essentially "bracketing" the claimed compounds in structural similarity are all known, one of ordinary skill in the art would clearly be motivated to make those claimed compounds in searching for new products in the expectation that compounds similar in structure will have similar properties. In re Gyurik, 596 F.2d 1012, 1018, 201 USPQ 552, 557 (CCPA 1979); See In re May, 574 F.2d 1082, 1094, 197 USPQ 601, 611 (CCPA 1978) and In re Hoch, 57 CCPA 1292, 1296, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (1970). As stated in In re Peterson, 315 F.3d 1325, 1329-30, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003), that "A prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art". Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range, from the broader range disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range has a suitable utility. Also see MPEP § 2131.03 and § 2123.

With respect to the claimed Al content "over 6%" is not patentable different from 6 wt.% as disclosed by EP 0799901. It is well settled that a prima facie case of obviousness would exist where the claimed ranges and prior art do not overlap but are close enough that one ordinary skilled in the art would have expected them to have the same properties, *In re Titanium Metals Corporation of America v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), *In re Woodruff*, 16 USPQ 2d 1934, *In re Hoch*, 428 F.2d 1341, 166 USPQ 406 (CCPA 1970), and *In re Payne* 606 F.2d 303, 203 USPQ 245 (CCPA 1979). To overcome the prima facie case, an applicant must show that there are substantial, actual differences between the properties of the claimed compound and the prior art compound. *In re Hoch*, 428 F.2d 1343-44, 166 USPQ 406 at 409. The same argument is also reiterated to EP 1127950 and EP 1048743 below.

Moreover, it is known in the art of EP 0799901 to add Al content from 2 to 10 wt.% in order to improve age-hardening and mechanical strength (page 2, lines 51-52). It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 1, 3, 5, and 9 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 5147603 to Nussbaum et al, EP 1127950, or EP 1048743 (All are from PTO-1449).

Nussbaum (col. 1, lines 20-63), EP 1048743 ([0012]), or EP 1127950 (abstract) discloses the features including the claimed Mg based alloys' compositions. Therefore, when prior art compounds essentially "bracketing" the claimed compounds in structural similarity are all known, one of ordinary skill in the art would clearly be motivated to

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make those claimed compounds in searching for new products in the expectation that compounds similar in structure will have similar properties. In re Gyurik, 596 F.2d 1012, 1018, 201 USPQ 552, 557 (CCPA 1979); See In re May, 574 F.2d 1082, 1094, 197 USPQ 601, 611 (CCPA 1978) and In re Hoch, 57 CCPA 1292, 1296, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (1970). As stated in In re Peterson, 315 F.3d 1325, 1329-30, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003), that "A prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art". Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range, from the broader range disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range has a suitable utility. Also see MPEP § 2131.03 and § 2123.

With respect to the instant claimed Ca/Al ratio that since the recited compositions are overlapped by compositions of cited references, the Ca/Al ratio would have been inherently possessed by the compositions of cited references. Moreover, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, In re Cooper and Foley 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, Taklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77, and In re Pilling, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. In re Austin, et al., 149 USPQ 685, 688.

The recited 'over 2%' in claim 1 reads on '2%' Ca as disclosed by EP 1127950 because it is unclear how much over 2%. With respect to "2.5%" in claim 3 that it is well settled that a prima facie case of obviousness would exist where the claimed ranges and prior art do not overlap but are close enough that one ordinary skilled in the art would have expected them to have the same properties, *In re Titanium Metals Corporation of America v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), *In re Woodruff*, 16 USPQ 2d 1934, *In re Hoch*, 428 F.2d 1341, 166 USPQ 406 (CCPA 1970), and *In re Payne* 606 F.2d 303, 203 USPQ 245 (CCPA 1979). To overcome the prima facie case, an applicant must show that there are substantial, actual differences between the properties of the claimed compound and the prior art compound. *In re Hoch*, 428 F.2d 1343-44, 166 USPQ 406 at 409.

Response to Arguments

Applicant's arguments filed November 26, 2007 have been fully considered but they are not persuasive.

EP '901 teaches that to obtain the desired effect of highest elongation, the amount of aluminum within the alloy should be limited to not exceed 6% by weight. See page 2, lines 55 and 56 of EP '901. However, the composition of claim 1 requires an Al content of over

Applicants' argue that " 6% by weight. " But, there is no evidence that the claimed alloy has better elongation than the alloy of EP 0799901. Moreover, it is known in the art of EP 0799901 to add Al content from 2 to 10 wt.% in order to improve age-hardening and mechanical strength (page 2, lines 51-52). It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Applicants argue that examples of EP 0799901 and other cited references fail to show claimed composition and Ca/Al ratio. However, it is well settled that the examples of the cited reference are given by way of illustration and not by way of limitation. In re Widmer, 353 F.2d 752, 757, 147 USPQ 518, 523 (CCPA 1965), In re Boe, 148 USPQ 507 (CCPA 1966), and In re Snow, 176 USPQ 328. Nonetheless, EP 0799901 discloses 2-10 wt.% Al and Ca/Al less than 0.8 which clearly overlapped the claimed Al and Ca/Al ratio (page 2, lines 51-58 and page 3, line 13-15 and lines 40-41).

Moreover, the alloy of claim 1 is further distinguished from the alloy of EP '901 because the alloy recited in claim 1 excludes the presence of Si, which is an essential element

Applicants argue that " in the alloy of EP '901 as shown in Tables A1-A2. " But, examples are for illustration not limitation. Applicants' attention is directed to page 3, lines 40-41 that "⁴⁰ The above magnesium alloy may further contain no more than 2% by weight of at least one element selected from the group consisting of zinc, manganese, zirconium, and silicon, and/or no more than 4% by weight of a rare earth metal. " Silicon is merely an optional element.

"Thus, EP '901 does not disclose any alloy composition satisfying all of the claim 1

Applicants argue that " requirements, including the ranges of the Al content, Ca content and Ca/Al ratio of claim 1. " But, applicants' attention is directed to page 3 of EP 901 below:

comprising 2 to 6% by weight of aluminum and 0.5 to 4% by weight of calcium, and the balance of magnesium and unavoidable impurities, and preferably further Sr of no more than 0.15% by weight, with adjustment, if necessary, of a Ca/Al ratio of no more than 0.8, preferably a Ca/Al ratio of no more than 0.6.

⁴⁰ The above magnesium alloy may further contain no more than 2% by weight of at least one element selected from the group consisting of zinc, manganese, zirconium, and silicon, and/or no more than 4% by weight of a rare earth metal

Applicants' argument with respect to Nussbaum is noted. But, applicants fail to point out what alloying element and its content is not disclosed by Nussbaum. The Ca/Al would inherently overlap because the claimed Ca and Al contents are overlapped

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by Nussbaum. Moreover, the claimed Ca/Al ratio is known in the art of cited references (see EP 901, page 3, line 15, for example). Moreover, applicants fail to show the claimed Ca/Al ratio is critical and possesses unexpected result.

Applicants' argument with respect to EP '531 is noted. But, it has been withdrawn in view instant transitional expression "consisting of".

Applicants argue that examples of EP '743 and EP '950 do not disclose the claimed composition. Examiner reiterates the response set forth above relate to examples.

Applicants argue that examples of cited references fail to disclose the claimed features. When examples of cited references meet the claimed features, the rejection would be 35 U.S.C 102, not 103 as instant rejections. Moreover, examples of the cited reference are given by way of illustration and not by way of limitation.

Conclusion

All recited limitations in the instant claims have been met by the rejections as set forth above.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Thursday from 5:30 A.M. to 4:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sikyin Ip/
Primary Examiner, Art Unit 1793

July 20, 2008